UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,193	04/17/2006	Tsukasa Fujieda	060321	8608

23850 7590 01/04/2011

KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
4th Floor
WASHINGTON, DC 20005

EXAMINER	
WALTERS JR, ROBERT S	
ART UNIT	PAPER NUMBER
1711	

MAIL DATE	DELIVERY MODE
01/04/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,193	FUJIEDA, TSUKASA	
	Examiner	Art Unit	
	ROBERT S. WALTERS JR	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,8-10,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8-10,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

Claims 1, 8-10, 17 and 18 are pending and presented for examination.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2010 has been entered.

Response to Arguments

Applicant's arguments filed 12/20/2010 have been fully considered but they are not persuasive. The applicant's maintain their arguments that the prior art does not teach applying an aqueous luster thermosetting base coating composition **to a substrate** in two to five stages, in such a manner that the thickness of the base coating composition applied in each stage becomes 0.3 to 5 microns when cured. The examiner maintains that Tomioka teaches this limitation. Tomioka clearly teaches applying a base coating to a substrate (in this case **the substrate** is an automobile body having a dried coating) in two stages wherein the thickness of the base coating applied in each stage becomes 0.3 to 5 microns (see column 4, lines 19-32). The claims do not exclude the substrate from being a coated substrate. The claims only recite applying a base

coating in two to five stages to a substrate wherein each stage is from 0.3 to 5 microns when cured. Therefore, the examiner disagrees that the recitation of two to five stages necessarily excludes the possibility of additional steps providing additional coating layers.

The applicant's further argue that the newly amended claims are commensurate in scope with the earlier provided Declaration of 10/20/2010. However, the examiner maintains that these newly amended claims are still not commensurate in scope with the Declaration provided on 10/20/2010. The claims broadly recite any water-soluble or water-dispersible, crosslinkable functional group-containing resin, and any crosslinking agent and any flaky luster pigment having the recited dimensions. However, the Declaration provides unexpected results only for the combination of a specific resin (the acrylic resin of the Declaration), crosslinking agent (the specific crosslinking dispersion disclosed in the Declaration), and flaky luster pigment (Alpaste MH-6601).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1, 8-10, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomioka (U.S. Pat. No. 5079030) in view of Takashi et al. (JP Pub. No. 2001-149857) and Carpenter (U.S. Pat. No. 5320673) and Noritake et al. (JP 2003-117481) and Yoshioka et al. (U.S. PGPUB No. 2002/0007769).

Regarding claims 1, 8-10, 17 and 18, Tomioka teaches a method of forming a luster coating film (see abstract) comprising the steps of:

(1) applying an aqueous luster base coating composition to a substrate in two to five stages, such that the thickness of the base coating applied in each stage is between 0.3 to 5 μm when cured (this is accomplished by using only an air spray to deposit each stage, see column 4, lines 19-32);

(2) applying a clear coating composition over the uncured or heat-cured coating layer of the base coating composition (column 4, lines 38-40);

(3) heating the two-layer coating comprising the base coating composition and the clear coat to obtain a cured two-layer coating film (column 4, lines 40-45).

Tomioka further teaches allowing the luster base coat to stand or preheating the coating to about 50 to about 80 ℃ (column 3, lines 50-62 and column 4, lines 3-7) after each stage. Tomioka further teaches the substrate that is being coated is an automotive body (abstract) and also

therefore teaches an automotive body having a luster coating film formed by the method (abstract).

Tomioka however fails to explicitly teach the base coatings and clear coatings being thermosetting coatings comprising the components as claimed, the thermosetting base coatings having a solids content of 5-15%, or having a solids content of at least 40% one minute after the application in each stage, and the additional step of applying a second clear coat layer directly on top of the previous clear coat layer. Tomioka further fails to teach applying an identical second set of base and clear coatings to provide at least a four-layer coating.

Takashi teaches forming a luster coating by forming a first metallic coating followed by a clear coat and then further applying a second metallic coating and a second clear coat layer followed by curing of the 4-layer coating (abstract). Takashi further teaches that the second metallic coating thickness should be only 5- 13 microns as it should be no more than a concealing film thickness. Takashi also teaches that the aqueous luster thermosetting base coating compositions have a solids content of 14 weight % (0033 and 0035).

Carpenter teaches a method of forming a luster coating using an aqueous luster base coat and a clear coat (column 16, lines 54-68). Carpenter teaches that both these coatings may be thermosetting compositions (column 16, lines 65-66) and that preferably the clear coat is applied in two layers (column 16, lines 60-63). Carpenter further teaches an aqueous (column 14, lines 52-56) luster thermosetting base coat composition comprising a water soluble or dispersible crosslinkable functional group-containing resin (column 14, lines 63-68), a crosslinking agent (column 15, lines 3-7), and a flaky luster pigment (column 13, lines 45-47 and column 14, lines

40-42) having a mean particle diameter as claimed (column 13, lines 48-51) which has been surface modified.

Noritake teaches the importance of drying (by standing or heating, see 0019) an aqueous thermosetting base coating composition prior to applying any aqueous metallic pigment compositions thereon to a solids content of greater than 40 % (see abstract, 0008 and 0019).

Finally, Yoshioka teaches using flaky luster pigment in metallic coatings (abstract), wherein the flaky luster pigment has particle diameter of from 2 to 50 microns, with a thickness of about 0.1 to 5 microns (0027).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tomioka's method by adding an additional base coat and clear coat layer as a concealing layer, wherein the base coating compositions contain from 14 % solids content, according to Takashi as well as utilizing the base coating compositions and optionally adding an additional final clear coat layer, as disclosed by Carpenter to form either a 4 or 5-layer coating. Regarding the additional base coat layer, as this layer is expected to serve as a concealing layer, it would also have been obvious to one of ordinary skill in the art at the time of the invention to deposit this second base layer to a thickness of 0.3 to 5 microns in each stage similarly to depositing the first base coating layer in Tomioka's method. Further, it would have been obvious to one or ordinary skill in the art at the time of the invention to ensure that the solids content of the base coating compositions one minute after application in each stage is at least 40 weight %, as is taught by Noritake. Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention to select a flaky luster pigment having the dimensions as disclosed by Yoshioka.

First, one would have been motivated to modify Tomioka's method by adding the second base coat in the claimed thickness and the second clear coat as disclosed by Takashi, as Takashi teaches that these steps allow for the coating to be free from metal unevenness and provides an excellent flip-flop property (abstract). Second, one would have been motivated to utilize the compositions and methods disclosed by Carpenter as he teaches that his method provides coatings having an excellent appearance and physical properties (column 16, lines 66-68), and that the metallic flakes described are resistant to oxidation with minimal discoloration or diminution of the metallic effect, and provide superior dispersion in the waterborne composition and thus result in a coating with an enhanced metallic effect and improved color development (column 2, lines 31-43). Third, one would have been motivated to modify Tomioka's method by ensuring that the base coatings had a solids content of greater than 40 % after each stage, as Noritake teaches that this results in the metallic coating film having excellent orientation of the metallic pigment, as well as an excellent flip-flop property. Finally, one would have been motivated to modify Tomioka's method by using a flaky luster pigment having the dimensions disclosed by Yoshioka as Yoshioka teaches that pigments having these dimensions provide an excellent luster feeling (0027).

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miyazaki et al. (U.S. Pat. No. 4950507)

Conclusion

Claims 1, 8-10, 17 and 18 are pending.

Claims 1, 8-10, 17 and 18 are rejected.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Thursday, 9:00am to 7:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S. WALTERS JR/
December 31, 2010
Examiner, Art Unit 1711